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Company

> Company Overview

Ticona - Engineering polymers for technical solutions

Ticona is a global company of design engineers, material scientists, technical support experts, and customer service representatives dedicated to helping you exceed your expectations. We engineer materials to meet the needs of our customers' most demanding applications. Ticona is a solutions-driven company that uses advanced polymer technology to produce materials for a wide spectrum of applications - from children's toys to industrial gears.

Our global reach, extensive product portfolio, and engineering and science capabilities enable us to work with you at any stage in your process - be it at early concept or in full production - anywhere in the world. And whenever we collaborate on a project, our goal is simple: to meet your design and engineering challenges, and exceed your expectations of customer support. You can count on us.

Ticona's materials are the leaders in acetal polymers, liquid crystal polymers, long fiber reinforced thermoplastics, and we hold key positions in a broad portfolio of other thermoplastics. Ticona's products serve designers and engineers in a number of key markets - automotive, appliance components, information technology, consumer & recreation products, industrial, medical & health, and others.

We have over 2,300 employees in polymer production, compounding plants, and laboratory and design centers throughout the world (see "**Facilities**" for detail). Ticona polymers are manufactured and sold in Asia by Polyplastics Co., Ltd, in which Ticona holds a 45% interest.

Ticona polymers include:

- Celcon®, Hostaform®, and Duracon® acetal copolymer (POM)
- GUR® ultra-high molecular weight polyethylene (UHMW-PE)
- Celanex® and Duranex® thermoplastic polyester
- Impet® thermoplastic polyester
- Vandar® thermoplastic polyester alloys
- Riteflex® themoplastic polyester elastomer
- Vectra® liquid crystal polymer (LCP)
- Vectran™ liquid crystal polymer (LCP)
- Celstran®, Compel®, and Fiberod® long fiber reinforced thermoplastics (LFRT)
- Fortron® polyphenylene sulfide (PPS)
- Celanese® nylon-6/6
- Topas® cyclic olefin copolymer (COC)

Fortron® is a trademark of Fortron Industries, Inc.
Duracon® and Duranex® are offered by Polyplastics Co., Ltd.

More Information

+ **History**

Ticona is a global leader in engineering thermoplastics.

Product Information

> Trad Names Overview > Celanex® Thermoplastic Polyest r

Celanex® Thermoplastic Polyester combines outstanding physical properties with superior thermal and chemical resistance. Celanex Thermoplastic Polyester is tough, rigid, and dimensionally stable-perfect for high-performance applications. It also has superior electrical properties.

Celanex Thermoplastic Polyester has a desirable balance of properties:

- High strength, rigidity and toughness
- Low creep even at elevated temperature
- Resistance to high temperature
- Minimal moisture absorption
- Resistance to many chemicals, oils, greases and solvents
- Excellent electrical insulation properties

Celanex Thermoplastic polyester has found use in many applications. Examples include:

- Electronic/electrical uses - motor end caps, connectors, stator insulation, switches, coils bobbins, relays, cases and covers
- Automotive uses - ignition components, door handles, painted exterior body panels, shrouds, fan blades
- Industrial uses: paint brush bristles, filters and films
- Consumer uses - typewriter and terminal keytops, housings, power tool components

Celanex Thermoplastic Polyester is available in a wide range of grades, including unreinforced, glass and mineral reinforced, polymer blends, impact modified and flame retarded grades.

<Print>

Ticona-Engineering Polymers for Technical Solutions

Trade Names

+ **Celanex®**
  - Data Sheets
  - Processing
  - Troubleshooting
  - General Literature
  - Process Literature
  - Approvals
+ **Celanese® Nylon 6/6**
+ **Celcon®**
+ **Celstran®**
+ **Compel®**
+ **Duracon®**
+ **Duranex®**
+ **Fortron®**
+ **GUR®**
+ **Hostaform®**
+ **Impet®**
+ **Riteflex®**
+ **Topas®**
+ **Vandar®**
+ **Vectra®**
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Glossary Terms

Antistatic - Preventing or inhibiting the build-up of static electricity.

Barrier - Impermeable to the liquid or gas phases of most chemicals and reagents.

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BOPET - Biaxially-oriented PET film.

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Edge Trim - 1) That portion of a web which is removed due to its use as the gripped area during tentering;
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Esterification - The reaction of an acid with an alcohol to form an ester.

Extrusion - Process by which polymer is propelled continuously along a screw through regions of high temperature and pressure where it is melted and compacted, and finally forced through a die (slit) to form a thin film.

Material Information Polyethylene terephthalate

Polyester, PET, PETP

Click to see Standard Catalogue items from one of the forms

Fabric Fibre Film Granule Laminate Mesh Metallised Film Monofilament Rod Sheet

General Description:

Common Brand names : Arnite Dacron Hostaphan Impet Melinar Melinex Mylar Rynite Terylene Trevira

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PET is a hard, stiff, strong, dimensionally stable material that absorbs very little water. It has good gas barrier properties and good chemical resistance except to alkalis (which hydrolyse it). Its crystallinity varies from amorphous to fairly high crystalline; it can be highly transparent and colourless but thicker sections are usually opaque and off-white.

It is widely known in the form of biaxially oriented and thermally stabilised films usually referred to by their main brand names Mylar, Melinex or Hostaphan. Strictly speaking, these names should be used only for this type of film whose properties are different from, and in several respects superior to, those of "ordinary" PET film.

These "Mylar®-type" films are used for capacitators, graphics, film base and recording tapes etc. PET is also used for fibres for a very wide range of textile and industrial uses (Dacron®, Trevira®, Terylene®). Other applications include bottles and electrical components.

Chemical Resistance

Acids - concentrated	Good
Acids - dilute	Good
Alcohols	Good
Alkalis	Poor
Aromatic hydrocarbons	Fair
Greases and Oils	Good
Halogens	Good
Ketones	Good

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Polyester is used mostly as a clear substrate, because of its transparency without apparent color. It is very dimensionally stable, weather resistant, rigid and tear resistant. (Dupont's trade name for polyester *is Mylar* .)

Polyethylene is used by us most often as a flexible sh for banners. It has excellent weatherability, can sewn or sealed, and sheets easily. Its only real downf is low dimensional stability and low surface ener *(you remember about surface energy)*, so we process quickly, and try not to keep too much in stock.

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Polyolefin is the name given to a blend of ole plastics. The most common of these plastics a polyethylene, polypropylene and polybutylene. graphics products, the best example is *Tyvek* bra synthetic paper, which is a spunbound Polyolefin.

Polyvinyl chloride *(vinyl)* is used to make ma different substrates, the primary differences in whi are the existence and amounts of plasticizers whi create varying levels of resilience, flexibility a elasticity. Vinyl ranges from a rigid vinyl, used to ma credit cards, to pressure sensitive decals stocks, a static cling vinyl. When used with a filler which imbedded in the vinyl sheet, reinforced or support vinyl is created. Our primary use of which is as durable outdoor banner material which can be ma to resemble cloth.

Welcome to the Goodfellow website

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Serving the Research needs of Science and Industry worldwide

Goodfellow supplies metals, polymers, ceramics and other materials to meet the research, development and specialist production requirements of science and industry worldwide.

Goodfellow offers two distinct services to meet these requirements:

The first meets the needs of those who want small quantities of products from our standard range within 24 - 48 hours.

The second service is for those who require larger quantities or further processing of our standard products, or who need a product which falls within our general area of supply expertise.

The following pages provide a guide to the products and services offered by Goodfellow. View them and see how Goodfellow can help you.

Polyethylene terephthalate Polyester, PET, PETP

Click here to return to product

Find products containing this material in the following form: All Search

Common Brand Names: Arnite, Dacron, Hostaphan, Impet, Melinar, Melinex, Mylar, Rynite, Terylene, Trevira

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Applications include bottles and electrical components but it is probably most widely known as the biaxially oriented and thermally stabilized films used for capacitators, graphics, film base and recording tapes etc.

Chemical Resistance

Acids - concentrated	Good
Acids - dilute	Good
Alcohols	Good
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Aromatic hydrocarbons	Fair
Greases and Oils	Good
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Ketones	Good

Electrical Properties

Dielectric constant @1MHz	3.0
Dielectric strength ($kv.mm^{-1}$)	17
Dissipation factor @ 1kHz	0.002
Surface resistivity (ohm/sq)	10^{13}
Volume resistivity (ohmcm)	$>10^{14}$

Mechanical Properties

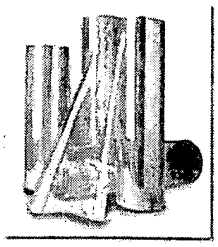
Coefficient of friction	0.2-0.4
Hardness - Rockwell	M94-101
Izod impact strength ($j\ m^{-1}$)	13-35
Poisson's ratio	0.37-0.44(oriented)
Tensile modulus (gpa)	2-4
Tensile strength (mpa)	80, for biax film 190-260

Physical Properties

Density ($g\ cm^{-3}$)	1.3-1.4

our mission
applications
technology
features & benefits
environmental & safety
news & related sites
members list & profiles
contact AMPEF
member login
home

At AMPEF, our mission is to:



- Promote the use of polyester film, while focusing on sustainable growth and environmental "greenness;"
- Communicate and promote awareness about AMPEF and its activities;
- Seek solutions to issues of general interest to all members, including health and safety and environmental topics;
- Collate and disseminate overall industry statistics and other industry information, including industry news and developments; and
- Improve communication within the industry, and its suppliers, customers, and consumers.

The object of the association, in the general interest and in all countries, is to:

- Encourage the development, continuous improvement, and use of polyester film;
- Study and understand the polyester film market;
- Seek solutions to problems, particularly with respect to governmental standards and technical regulations;
- Collect historical information and statistical data on polyester film; and
- Maintain relationships with all similar organizations—public or private.

glossary of terms printer friendly

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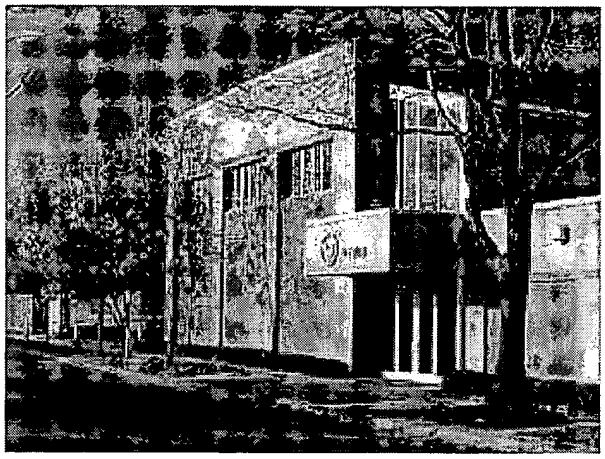
PO Box 6
Newton, Iowa 502
641-792-9000 phon
641-791-7704 fa
jeffe@vernoncompany.co

Company Profile

Specializing in Screen printed graphics for vehicle, products, point safe displays & floor graphics. Vernon Graphics, a division of the Vernon Company, has manufactured high quality, screenprinted graphics for over 50 years. We have grown from a small manufacturer of screen printed advertising specialty products to a supplier of multi-colored graphics for large and small fleets of trucks, product identification, point of sale promotional products, banners, window signs, building signage and floor graphics.



For over 50 years we have been responding to customer needs and suggestions. Satisfied customers continue to make our business grow by relying on us for continuous reorders, new product development and day to day competitive service.

Vernon Graphics has the equipment and expertise to supply high quality, competitivel priced products, and to satisfy customers on time delivery requirements. We offer customized inventory stocking programs which allows customers to purchase up to a year's supply of product and have them stocked in our warehouse and shipped to multiple locations as needed. This unique service reduces customer's cash flow and minimizes the amount of space required for product inventory.

Located in Newton, IA, the heart of the midwest where the work ethic keeps our qualit above industry standard and production effectiveness to meet the toughest customer specifications.

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POLY what? The prefix "Poly" does not mean that every plastic name that begins with it is related or has the same characteristics. As a matter of fact, quite the opposite is true.

Poly simply means that the substance is a result of polymerization, or a combining of many small molecules (monomers) together to form a new substance (polymer) who's molecular structure is similar, but who's characteristics are different. Every plastic substrate we use has a quality about it that makes it preferable for the use intended. In many cases names are shortened for the substrates that we use. Although they are not technically correct, these nicknames are easier to remember. Polystyrene *(styrene)* is the largest by far in terms of quantity used. It is moderately dimensionally stable, flexible but not elastic, can be produced with about any surface texture desired, can withstand moderate abuse without creasing or cracking, can be cut easily, is available in virtually any color, and most of all is relatively low in price.

Polyester is used mostly as a clear substrate, because of its transparency without apparent color. It is very dimensionally stable, weather resistant, rigid and tear resistant.

(Dupont's trade name for polyester *is Mylar* .)

Polyethylene is used by us most often as a flexible she for banners. It has excellent weatherability, can sewn or sealed, and sheets easily. Its only real downf is low dimensional stability and low surface ener (*you remember about surface energy*), so we process quickly, and try not to keep too much in stock.

Polypropylene is used widely in the printing industr As a single polymer, polypropylene is used to ma Coroplast brand corrugated plastic. As a co-polyme it is used to make synthetic paper under many tra names, Kimdura as an example. Primary advantag are durability, high impact strength and light weigh It does generally have a low surface energy as a sing polymer, and must be corona treated prior to printin

Polyolefin is the name given to a blend of olef plastics. The most common of these plastics a polyethylene, polypropylene and polybutylene. graphics products, the best example is *Tyvek* bra synthetic paper, which is a spunbound Polyolefin.

Polyvinyl chloride *(vinyl)* is used to make ma different substrates, the primary differences in whi are the existence and amounts of plasticizers whi create varying levels of resilience, flexibility a elasticity. Vinyl ranges from a rigid vinyl, used to ma credit cards, to pressure sensitive decals stocks, a static cling vinyl. When used with a filler which imbedded in the vinyl sheet, reinforced or support vinyl is created. Our primary use of which is as durable outdoor banner material which can be ma to resemble cloth.

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